

**What is claimed is :**

1. An apparatus for enhancing image resolution by a position perturbation modulation, comprising:

an optical lens assembly;

5 a wedge lens turntable embedded with a plurality of wedge lenses for projecting images passing through the optical lens assembly;

a step motor for rotating the wedge lens turntable; and

an image detector for capturing the projected image passing through the wedge lens turntable.

10 2. The apparatus of Claim 1, wherein the wedge lenses shift images upward, leftward, downward and rightward.

3. The apparatus of Claim 1, wherein the wedge lenses and a through hole are placed along the circumference of the wedge lens turntable.

15 4. The apparatus of Claim 1, wherein the wedge lens turntable has a hollow region for receiving a shaft whose one end is controlled by the step motor.

5. The apparatus of Claim 1, wherein the image detector is a capacitance-coupling device.

20 6. A method for enhancing image resolution by a position perturbation modulation, comprising the following steps:

(a) utilizing an image detector to capture projected images passing through wedge lenses which shift images upward, downward, rightward and leftward and a through hole;

25 (b) computing pixel numbers captured by the image detector via

the through hole and the wedge lenses, and subtracting the pixel number obtained from the through hole from the pixel numbers obtained from the wedge lenses respectively; and

- 5       (c)     determining a position of a questionable pixel according to the  
above computation and a predefined table.